

PEARSON, J.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

IN RE: EAST PALESTINE TRAIN) CASE NO. 4:23CV0242
DERAILMENT)
) JUDGE BENITA Y. PEARSON
)
) **ORDER**
) [Resolving [ECF No. 625](#)]

Pending is Third-Party Plaintiffs Norfolk Southern Corporation and Norfolk Southern Railway Company's (collectively "Norfolk Southern") Motion to Exclude the Expert Report and Testimony of Dr. Abid Kemal. ([ECF No. 625](#)). Third-Party Defendants GATX Corporation and General American Marks Company (collectively "GATX") filed an Opposition. ([ECF No. 687](#)). Norfolk Southern replied. ([ECF No. 702](#)). The Court has been advised, having reviewed the record, the parties' briefs, and the applicable law. For the reasons below, the Court grants Norfolk Southern's Motion to Exclude the Expert Report and Testimony of Dr. Abid Kemal.

I. Background

A.

These facts are largely excerpted from the Notice of Stipulation Regarding Uncontested Facts ([ECF No. 586](#)) between Norfolk Southern and GATX.

On February 3, 2023, "Norfolk Southern Train 32N derailed at approximately 8:54 pm on February 3, 2023, in East Palestine, Ohio. At the time of the derailment, Train 32N was traveling east on Main Track 1 along Norfolk Southern's Fort Wayne Line and consisted of two lead locomotives, one distributed power unit, and 149 rail cars." See [ECF No. 586 at PageID #: 17627, ¶1](#). "38 railcars derailed, including 11 cars carrying hazardous materials. [T]ank car

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UTLX 205907 containing butyl acrylates, a flammable liquid, was breached in the derailment and, as a result, released its contents which ignited and formed a pool fire.” [ECF No. 586 at PageID #: 17632, ¶¶ 56-57](#). “The pool fire resulting from Train 32N was near or surrounding five DOT-105J300W (DOT 105) tank cars carrying [VCM, a flammable gas], including GATX 95098[,] which was designed and constructed to transport [vinyl chloride monomer].” [ECF No. 586 at PageID #: 17629, 17632 ¶¶ 17, 19, 59](#). Before the derailment, on February 1, 2023, “four carmen from the [Terminal Railroad Association of St. Louis] TRRA performed an air brake test on Train 32N at 8:30 PM.” [ECF No. 586 at PageID #: 17630 ¶34](#). “[A]round February 4, 2023, a Unified Command was formed[] that included []local first responders and various federal and state agencies.” [ECF No. 586 at PageID #: 17633 ¶¶ 60-61](#). Two days later, “Unified Command, with the recommendation of Norfolk Southern and without dissent” executed a “vent and burn” procedure that “involves detonating explosives at certain locations on each tank to release and burn off a railcar’s hazardous contents. [ECF No. 586 at PageID #: 17632-33](#); *see also* [ECF No. 621 at PageID #: 32093](#). “GATX was not involved in the decision to perform the vent and burn.” [ECF No. 586 at PageID #: 17633 ¶64](#).

B.

To mitigate liability from the derailment, GATX proffers Dr. Kemal, an expert concluding that Norfolk Southern and its contractors prematurely performed a vent and burn. *See Opp’n. Expert Rep. of Abid Kemal, Ph.D., CFI, CVFI.* ([ECF No. 625-3](#)). Norfolk Southern

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moves to exclude Dr. Kemal's opinions, asserting that he lacks the qualifications to offer his opinions, and that such opinions are unreliable.¹ *See* Mem. In Supp. ([ECF No. 625-1](#)).

II. Legal Standard

[Rule 702 of the Federal Rules of Evidence](#) provides the standards for admitting expert testimony:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the proponent demonstrates to the court that it is more likely than not that:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert's opinion reflects a reliable application of the principles and methods to the facts of the case.

Id.

[Rule 702](#) "assign[s] to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." [Daubert v. Merrill Dow Pharm., Inc.](#), 509 U.S. 579, 597 (1993). It also governs the admissibility of expert testimony and codifies the Supreme Court's holdings in [Daubert](#) and [Kumho Tire Co. v. Carmichael](#), 526 U.S. 137 (1999). Expert testimony is admissible only if (1) the testimony is based on sufficient facts or data, (2) the testimony comes from reliable principles and methods, and (3) the expert has

¹ As discussed in a prior Order, the Court will rule on the exclusion of certain opinion evidence. *See* 01/22/25 Order ([ECF No. 738](#)) at PageID #: 51971 n.2 ("For efficiency here and in certain of the other twenty-plus Daubert motions filed, the Court will rule on the exclusion of certain opinion evidence. If an opinion is excluded, no testimony or report on those topics may be admitted.")

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reliably applied the principles and methods to the facts of the case. [Fed. R. Evid. 702](#). An expert's opinion cannot be based on mere speculation. [McLean v. 988011 Ontario, Ltd., 224 F.3d 797, 801 \(6th Cir. 2000\)](#). The proponent of the expert testimony has the burden of establishing by a preponderance of the evidence that the proposed testimony satisfies those standards. *See* [Fed. R. Evid. 702 advisory committee's note \(2000\)](#); [Daubert, 509 U.S. at 592 n.10](#). Expert testimony is not admissible “is the exception rather than the rule.” [In re Scrap Metal Antitrust Litig., 527 F.3d 517, 530 \(6th Cir. 2008\)](#) (quoting [Fed. R. Evid. 702 advisory committee's note \(2000\)](#)). When evaluating a scientific or experiential expert, a court “must examine the expert witness's testimony for reliability and relevance.” [United States v. Martinez, 588 F.3d 301, 323 \(6th Cir. 2009\)](#).

Furthermore, a *Daubert* analysis includes consideration of [Fed. R. Evid. 403](#). [Daubert, 509 U.S. at 595](#). Therefore, courts in the Sixth Circuit employ a four-prong test to determine the admissibility of expert opinions: “(1) that the witness, a qualified expert, (2) was testifying to a proper subject, (3) which conformed to a generally accepted explanatory theory, and (4) the probative value of the testimony outweighed its prejudicial effect.” [United States v. Smithers, 212 F.3d 306, 312 \(6th Cir. 2000\)](#) (citing [United States v. Green, 548 F.2d 1261 \(6th Cir.1977\)](#)).

III. Analysis

Dr. Kemal describes himself as a Principal in Exponent's Thermal Sciences practice, specializing in analyzing thermal failures involving infrastructure, consumer products and industrial equipment/processes. *See* Appendix A ([ECF No. 625-3](#)) at [PageID #: 35346-50](#). He provides design support for products and processes aimed at improving thermal performance for safety and efficiency and has led large-loss complex failure and product recall investigations to determine the root causes of failures. [ECF No. 625-3 at PageID #: 35347](#).

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Dr. Kemal offers 15 opinions, including opinions on polymerization, the pressure build-up of the railcars, emergency response options, and practices for responding VCM incidents. [ECF No. 625-3 at PageID #: 35249-51](#). Principally, Dr. Kemal concludes that the decision to vent and burn the tank cars was not based on credible evidence. [ECF No. 625-3 at PageID #: 35249-51](#). Norfolk Southern questions whether Dr. Kemal has the credentials to opine on the wide range of topics he addresses, and whether he can reliably opine on alternatives to the vent and burn without having analyzed OxyVinyls's Safety Data Sheet ("SDS") or statements made by OxyVinyls' representatives at the time of the derailment.

1. Dr. Kemal's Qualifications

Norfolk Southern urges that Dr. Kemal, a mechanical engineer, lacks the qualifications to opine on the recommendation to vent and burn because he lacks experience with derailments involving VCM. [ECF No.625-1 at PageID #: 35226-27](#). According to Norfolk Southern, Dr. Kemal's opinions on "the adequacy of the emergency response to a derailment, VCM's chemical properties and reactivity, VCM tank car loading, and vent and burn alternatives conducted on tank cars" extend beyond his area of expertise. *See Reply in Supp. Of Norfolk S. Co. and Norfolk S. Ry. Co.'s Mot. To Exclude the Expert Report and Test. of Dr. Abid Kemal* ([ECF No. 702](#)) at [PageID #: 51308](#). Ultimately, in the eyes of Norfolk Southern, Dr. Kemal's opinions on railroad emergency response alternatives ([ECF No. 625-1 at PageID #: 35227-28](#)) and the recommendation to perform a vent and burn ([ECF No. 625-1 at PageID #: 35228-30](#)) should be excluded.

GATX responds Dr. Kemal does not need the degree of knowledge that Norfolk Southern suggests, because his knowledge in thermodynamics, gas dynamics, combustion, fire and explosion analysis, material failures, metallurgical procedures, and structural failures will assist

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the trier of fact. *See ECF No. 687 at PageID #: 50079-81*. GATX argues that Dr. Kemal’s knowledge of those topics qualifies him to offer his 15 opinions. For example, it suggests that he may “opine on whether Norfolk Southern’s contractors reasonably feared that the tank cars might fail because of polymerization[,]”; whether “remedial cooling-related measures would have been effective alternatives”, “whether Norfolk Southern could have safely transferred the VCM out of the tank cars[,]” and “it allows him to reliably opine on what analysis and information-gathering Norfolk Southern and its contractors could have considered prior to the vent-and-burn.” *ECF No. 687 at PageID #: 50082*.

Neither *Rule 702* nor *Daubert* require that Dr. Kemal have the degree of experience that Norfolk Southern suggests for qualification. Instead, Rule 702 requires that the court “must determine whether the expert’s training and qualifications relate to the subject matter of his proposed testimony.” *Smelser v. Norfolk S. Ry. Co.*, 105 F.3d 299, 303 (6th Cir. 1997). “[Courts] take a liberal view of what ‘knowledge, skill, experience, training, or education’ is sufficient[.]” *Bradley v. Ameristep, Inc.*, 800 F.3d 205, 209 (6th Cir. 2015). In making that determination, the question is whether a particular expert can help resolve the issue in each case. *Bridger v. Union Ry. Co.*, 355 F.2d 382, 388 (6th Cir. 1966) (an expert’s opinion “requires an *ad hoc* determination, predicated upon the probable value of the witness’s testimony in relation to the intricacies of the particular lawsuit.”). “[T]he expert need not have complete knowledge about the field in question and need not be certain. He need only be able to aid the jury in resolving a relevant issue.” *Mannino v. Int’l Mfg. Co.*, 650 F.2d 846, 850 (6th Cir.1981).

Dr. Kemal has specialized knowledge in mechanical engineering, thermodynamics, gas dynamics, and combustion. *ECF No. 625-3 at PageID #: 35347*. He also holds certifications in Hazardous Waste Operation and Emergency Response Certification (*ECF No. 625-3 at PageID*

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[#: 35348](#)); and emergency response experience involving chemicals that also run the risk of a large scale explosions (Dep. Tr. of Abid Kemal ([ECF No. 625-5](#)) at [PageID #: 52052](#)). His experience and knowledge of emergency responses, including temperature trends necessary for polymerization, allow him to opine on the adequacy of railroad emergency responses and vent and burn alternatives—despite his lack of specialized expertise in railroad emergencies involving VCM. *See Palatka v. Savage Arms, Inc.*, 535 F. App'x 448, 455 (6th Cir. 2013)² (mechanical engineering professor qualified to opine on a variety of mechanical topics, such as a firearm, despite not being a firearm expert). Overall, Dr. Kemal's credentials cover a variety of relevant topics related to the vent and burn.

The Court finds that Dr. Kemal possesses the qualifications needed to opine on the adequacy of the emergency response to a derailment, VCM's chemical properties and reactivity, VCM tank car loading, and vent and burn alternatives conducted on tank cars, despite his lack of expertise in related specialized areas. As explained below, however, Dr. Kemal's qualifications, alone, are not sufficient to admit his opinions.

2. The Reliability of Dr. Kemal's Opinions

Norfolk Southern argues that Dr. Kemal's opinions are unreliable because he does not limit his opinions to information available at the time of the vent and burn recommendation; and

² The exclusion of the mechanical expert's material opinion, in *Palatka* is distinguishable from the instant case. In *Palatka*, the expert conceded that he was not qualified to offer his material opinion because he was not a material scientist; the materials used in the firearm went beyond his expertise; and he did not offer any testimony about the properties used in the firearm's barrel. *Palatka*, 535 F. App'x at 453 n.3. Here, Dr. Kemal's credentials support certain opinions in his report. *See e.g.*, [ECF No. 625-3 at PageID #: 35312](#) (discussing alternative cooling measures); *see also* [ECF No. 625-3 at PageID #: 35283](#) (providing the feasibility of hot tapping).

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he disregards OxyVinyl's SDS and the statements made by representatives of OxyVinyl's to Norfolk Southern and its contractors about the risk of polymerization of the VCM. [ECF No. 625-1 at PageID #: 35230-36](#). Norfolk Southern also argues that Dr. Kemal's opinion that alternatives to the vent and burn decision were not adequately considered is speculative ([ECF No. 625-1 at PageID #: 35237](#)) and suffers from hindsight bias ([ECF No. 702 at PageID #: 51315](#)).

GATX counters that Norfolk Southern's arguments challenge the credibility of Dr. Kemal's testimony, not its admissibility. [ECF No. 687 at PageID #: 50085](#). GATX suggests that Dr. Kemal's failure to consider the SDS and OxyVinyl's representatives' statements do not render Dr. Kemal's opinions unreliable, because an expert does need to consider every possible factor to render a reliable opinion, and Dr. Kemal relied on sufficient facts to support his conclusions. *See* [ECF No. 687 at PageID #: 50086-87](#) (explaining that Dr. Kemal relied on transcripts of first responders, tank-car temperature data, photos and videos of the scene, and he attended an inspection of the pressure relief device). GATX also responds that the failure to provide an alternative method to the vent-and-burn supports the factual foundation of Dr. Kemal's opinions, rather than its reliability. [ECF No. 687 at PageID #: 50089](#).

[Rule 702](#) demands that experts consider critical information to be considered reliable. *See also* [ECF No. 702 at PageID #: 51314](#) ("although he may have considered other evidence in the record, . . . this is insufficient to render his opinion reliable in light of the essential evidence that he overlooked.") "The task for the district court in deciding whether an expert's opinion is reliable is not to determine whether it is correct, but rather to determine whether it rests upon a reliable foundation, as opposed to, say, unsupported speculation." *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 529–30 (6th Cir. 2008). In [United States v. Lang](#), 717 Fed.Appx. 523 (6th

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Cir. 2017), the Sixth Circuit held that an expert opinion is reliable when it rests on a “*sufficient*” factual basis and is not “plainly contradict[ed]” by the record. *Id.* at 536 (emphasis in original).

The importance of the SDS and the statements made by OxyVinyl’s representatives regarding the risk of polymerization to the decision to vent and burn is critical. Federal law requires that safety data sheets contain “information that can be used in the mitigation of an incident involving hazardous materials.”³ *See* 49 C.F.R. § 172.602(a). The SDS at issue advises and punctuates that VCM, “MAY MASS EXPLODE IN FIRE. EXTREMELY FLAMMABLE GAS. CONTAINS GAS UNDER PRESSURE, MAY EXPLODE IF HEATED. POLYMERIZATION CAN OCCUR.” *See* VCM SDS (ECF No. 585-1) at PageID #: 17609. Several witnesses⁴ have testified to relying on OxyVinyl’s SDS at the time of the derailment. Even Dr. Kemal concedes that safety data sheets “provide[] information about the composition of the material and some information also about the incident -- what to do if -- if the chemical is involved in a -- in an incident with a release of the chemical.”⁵ ECF No. 625-5 at PageID #: 52091. Nonetheless, Dr. Kemal fails to account⁶ for the SDS and the statements made by

³ Dr. Kemal acknowledges that safety data sheets are required by federal law. ECF No. 625-5 at PageID #: 52093 (“Q. To your knowledge, are safety data sheets required by any federal regulations? A. Yes, I think so.”).

⁴ *See* Ex. 6 (Deutsch Dep. Excerpt) ECF No. 625-8 at PageID #: 35735 (“I had Oxy’s SDS with several places where it mentioned polymerization.”); Ex. 7 (Wood Dep. Excerpt) ECF No. 625-9 at PageID #: 35741 (“Q. And did you review that SDS? A. Yes.”); Ex. 8 (Day Dep. Excerpt) ECF No. 625-10 at PageID #: 35747 (“Q. Fair to say that [the SDS] was a reliance document for the HAZMAT response in East Palestine derailment? A. Yes, sir.”).

⁵ Dr. Kemal also asserts that a safety data sheet is “one of the tools to familiarize ourselves a little bit about the chemical itself, but there’s a lot of other information that one has to review to really understand the chemical and -- and its properties.” ECF No. 625-5 at PageID #: 52092.

⁶ Dr. Kemal testifies that he *did* review the safety data sheets, but he did not rely on the safety data sheets for any of his opinions; instead, he sought other information. *See*

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OxyVinyl's representatives about the risk of polymerization, despite it being known that these were considered in making the decision to vent and burn. Dr. Kemal's consideration of transcripts of first responders, tank-car temperature data, photos and videos of the scene, and other evidence to support his opinions does not cure these deficiencies. His failure to account for critical contrary evidence renders his methodology unsound and his resultant opinions unreliable.

Daubert, 509 U.S. at 590 (“[p]roposed testimony must be supported by appropriate validation -- i.e., ‘good grounds,’ based on what is known.”) Such cherry-picking is disqualifying. *In re Onglyza (Saxagliptin) & Kombiglyze (Saxagliptin & Metformin) Prods. Liab. Litig.*, 93 F.4th 339, 347 (6th Cir. 2024) (“cherry-picking[ing] ‘undermines principles of the scientific method and is a quintessential example of applying methodologies (valid or otherwise) in an unreliable fashion.’”) (citation omitted); *see also Lang*, 717 Fed.Appx at 536 (“cherry-picking data is just as bad as omitting it or making it up altogether.”) (citation omitted).

CONCLUSION

For the reasons above, the Court finds that Dr. Kemal's methodology renders his opinions unreliable. Additionally, his methodology renders his opinions irrelevant to the circumstances as they occurred on February 3, 2023. Most importantly, rather than help the jury, Dr. Kemal's testimony is more likely to confuse the jury.

ECF No. 625-5 at PageID #: 52092 (“Q. Did you review any safety data sheets in this matter? A. I did review the safety data sheet in this matter, but I do not have any opinion on the safety data sheet.”); *see also ECF No. 625-5 at PageID #: 52094-95* (“*No, I did not use the safety data sheet in forming my opinions.* Q. Why not? A. . . . “safety data sheets are a quick first bit -- of information . . . I typically go and get more reliable sources for the kind of material properties that I’m looking for. So I do -- typically will not just rely on a safety data sheet. You’d need more information, so -- and I found better information, and that’s what I used.”) (emphasis added).

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Accordingly, the Court grants Third-Party Plaintiffs Norfolk Southern Corporation and Norfolk Southern Railway Company's Motion to Exclude the Expert Report and Testimony of Dr. Abid Kemal. ([ECF No. 625](#)).

IT IS SO ORDERED.

January 27, 2025

Date

/s/ Benita Y. Pearson

Benita Y. Pearson
United States District Judge